

1. Product Description

StenSilan® WW is a single-component, silane-based water-repellent impregnation material. **StenSilan® WW** has chemical groups that react with mineral surfaces. These groups are chemically bound to the surface and make the surface hydrophobic (water-repellent).

It has high surface covering and diffusion properties. It is a white, water-based emulsion that forms an invisible layer after application. It is resistant to UV radiation and it also increases the resistance of the surface it covers.

2. Uses

StenSilan® WW makes natural stone, marble, ceramic, plaster, and aerated concrete surfaces hydrophobic; therefore, it prevents water absorption. **StenSilan® WW** does not form a protective layer separate from the surface but does not allow water to enter the structure by chemically binding to these materials and forming a hydrophobic structure in depth. Therefore, it does not prevent the structure from breathing or transmitting gases; it prevents water deposits beneath the coating and adhesive failure of coatings over time.

Since the heat transfer coefficient of water-absorbing materials increases when they absorb water, it also indirectly contributes to thermal insulation. Natural appearance of surfaces where **StenSilan® WW** is applied does not change. Surfaces coated with **StenSilan® WW** are not affected by contaminants carried by water.

StenSilan® WW is used in protection of all kinds of mineral surfaces exposed to atmospheric conditions and wetting effect of rain water or water from other sources due to these properties. Another positive effect of the water-repellent property of **StenSilan® WW** is preventing salt efflorescence on water-absorbent surfaces during drying. **StenSilan® WW** maintains its hydrophobic properties for 5-10 years depending on the penetration depth and surface abrasion.

At the end of these periods, **StenSilan® WW** application must be repeated. **StenSilan® WW** does not damage but improves paintability of the surfaces. Some of the major applications are:

- Surfaces such as concrete, plaster and aerated concrete
- Protection of historical and contemporary stone artworks against atmospheric effects
- Concrete floors and surface coatings, roads, runways, terraces, retaining walls

Stenkim® provides technical support for selecting the most suitable StenSilan® product.

Silane-Siloxane Emulsion Water-Repellent Impregnation

Highlights

- Single-component, silane-based
- Low-viscosity, white, water-based emulsion
- Allows the surface to breathe and preserves its natural appearance
- Very high surface covering and penetration into the material
- Impregnates the surface; creates deep hydrophobic structure without film layer
- Liquids on the surface can be easily cleaned by wiping and leave no stain
- Resistant to UV radiation, increases durability of coated surface
- Prevents salt efflorescence on absorptive surfaces during drying
- Improves paintability of the coated surface
- Can be applied by spraying or manually with brush and roller



3. Application

StenSilan® WW is applied at wide areas by spraying. It can be applied on small areas with a brush or roller. For continuous protection on wide surfaces, pouring the material onto the surface and then spreading it with a brush provides better results than applying it with a brush wetted with the material.

Surface cleaning, removing dust and loose parts, and repairing the cracks are required before the application. Application can be carried out on moist or dry surfaces. However, it is required to protect the material from water contact and rain until the applied material cures.

Floor temperature must be considered carefully because if the material dries too fast it cannot penetrate into the concrete. It must not be used at floor temperatures higher than 50 °C. It is sufficient if the surface is wetted with **StenSilan® WW** during the application.

But in cases where protection in depth is required from the material, the amount of **StenSilan® WW** used per square meter must be increased. The consumption is 2.5 to 10 m²/l depending on the surface properties and desired protection level. Opened packages must be consumed as soon as possible.

If the whole package will not be used, sufficient amount must be taken to another container and the container must be closed again tightly. Tools used must be cleaned at the end of the job. Since the material may adhere to all materials including glass, it must not get onto unintended surfaces.

In indoor applications, application must be carried out after the goods and plants are covered. Turbid and settled, partially cured materials must not be used.

4. Cleaning

Equipment used can be cleaned with water at the end of the job.

5. Safety

Applicators and supervisors must read the Material Safety Data Sheet (SDS) carefully and follow the instructions provided. Emptied packages must be handled in compliance with relevant regulations and laws. The application must be carried out by skilled workers under supervision of experts and the applicators must use all kinds of protective equipment required for the worksite and the task such as goggles, mask and gloves.

6. Storage

Packages must not be exposed to direct sunlight. Storage temperature must be between 5 and 30 °C. Under these conditions, the material will retain its properties in unopened containers for 6 months from the production date.

Protect the product from freezing. Frozen material cannot be reused.

7. Disclaimer

This document is provided for general information and reflects **Stenkim®**'s laboratory data and field experience at the time of publication. **Stenkim®** reserves the right to revise this information at any time without notice.

Stenkim® warrants that its products conform to the stated specifications on delivery. The buyer is responsible for determining the product's suitability for the intended application and for all conditions of transport, storage, handling, and use. **Stenkim®** accepts no liability for results obtained under conditions outside its control. **Stenkim®**'s liability under this warranty is limited to replacement of non-conforming product and excludes any consequential or indirect damages.



8. Technical Data

Property	Method	Result
Viscosity	EN ISO 3219	>5 cps
Consumption		0.1-0.4 l/m ²
Density	EN ISO 2811-2	1 ± 0.05 g/cm ³
Concentration		min. 6%
Shelf Life		6 months
Packaging		10 liter packages

Stenkim® reserves the right to make changes to the values in this table at any time.

